

# THE NATURAL HISTORY OF HAY FEVER

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The regular and annual visitations of hay fever with its annoying and unpleasant symptoms make it a most distressing condition for those who suffer from it. We attempt to control these symptoms (for we know of no "cure") with a variety of antihistaminics and by attempts at desensitization.

In spite of the frequency of hay fever there is no reliable information or data as to what happens to its sufferers. Do they go on suffering attacks year after year till they die of old age or does the condition follow some pattern of natural history? To try and provide this information a group of patients with hay fever in a general practice have been followed for more than 5 years.

## Methods

The practice is situated in a S.E. London suburb and the patients belong to the middle classes.

The average population at risk during the period of the study was as shown in table I.

TABLE I  
AVERAGE POPULATION AT RISK

Age ..	0—	5—	10—	20—	30—	40—	50—	60—	70+	Totals
Male ..	221	249	513	360	496	477	408	252	143	3119
Female ..	242	249	377	429	538	438	439	311	269	3292

Hay fever was diagnosed in patients who presented with characteristic bouts of sneezing with dry nose and running eyes during the "hay fever season" between the end of May and the end of July.

Individual records were kept over a period of 5 years, 1957-1962, on all patients seen on account of hay fever. Information was sought on the age of onset of first symptoms of hay fever, the

family history and any other associated allergic diseases such as asthma, eczema, or urticaria. In this way the annual prevalence could be measured together with other epidemiological facts.

To obtain further details on the probable final outcome of the condition 32 patients, aged 50 and over, who were known to have suffered from hay fever in their youth, were questioned about their experience of the condition.

### Results

*Prevalence.* During the 5 years (1957-1962) 185 patients (90 males and 95 females) were seen with hay fever on one or more occasions. This represents a rate of 2.8 per cent of those at risk. Some were seen every year and others only once because they coped with their symptoms themselves or merely asked for a repeat prescription of their favourite antihistaminic. There may be yet other patients in the practice who suffer from hay fever but who have never felt that they required medical help. This prevalence rate is therefore a minimal one.

Table II shows the age and sex distributions and the rates per 1,000.

TABLE II  
NUMBERS AND RATES PER 1,000 OF PATIENTS WITH HAY FEVER SEEN DURING  
5 YEARS (1957-1962)

<i>Age</i>	0	5	10	20	30	40	50	60	70+	<i>Total</i>
Males:										
Number ..	3	8	22	18	18	11	4	4	2	90
Rates per 1,000 ..	13.6	32.1	42.9	50.0	36.3	23.1	9.8	15.9	14.0	
Females:										
Number ..	1	7	20	19	27	10	7	2	2	95
Rates per 1,000 ..	4.1	28.1	53.1	44.3	50.2	22.8	15.9	6.4	7.4	

It is evident therefore that hay fever is a young person's complaint. In both sexes the peak prevalence rates are between 10 and 40, affecting predominantly those in their teens and third and fourth decades. If this is so what then happens to these patients after the age of 40? It is most likely that the condition tends to undergo a spontaneous remission and that after the age of 40 or so symptoms

become less troublesome each year.

This is confirmed by the experiences of patients now aged 50 and over who had suffered from hay fever in the past. It was possible to discover 32 such patients in the practice and their experiences were as shown in table III.

TABLE III  
AGES AT WHICH PATIENTS, NOW AGED 50 AND OVER, CEASED TO SUFFER FROM  
HAY FEVER

<i>Age</i>	20	30	40	50	60	70+	<i>Total</i>
Male .. ..	1	4	8	3	1	—	17
Female .. ..	2	2	8	2	1	—	15

This retrospective survey confirms that hay fever does indeed tend to burn itself out from the age of 30 onwards. However, this does not mean that there are no patients with hay fever over the age of 40 or 50. There is a small group of individuals who only begin to suffer from this condition after the age of 50 and yet another group in whom their symptoms are life-long.

*Age of onset.* The ages at which symptoms of hay fever were first noted are shown in table IV.

TABLE IV  
AGES OF ONSET OF HAY FEVER

<i>Age</i>	0	10	20	30	40	50	60+	<i>Total</i>
Males: Number	22	32	16	13	7	3	1	94
Percentages	24	35	17	13	8	2	1	100
Females: Number	28	34	20	9	2	1	1	95
Percentages	39	35	21	10	3	1	1	100

The great majority (over 80 per cent) started to suffer from the symptoms of hay fever by the time they had reached 30.

*Family history.* A positive family history of hay fever or asthma in near relations, i.e., parents or siblings, was present only in a minority of patients (15 per cent). The rates were similar in both

sexes—14 per cent (13 patients) in males and 16 per cent (15 patients) in females.

*Associated allergic disorders.* A history of an associated allergic disorder such as asthma, eczema, or urticaria was obtained in 43 per cent of patients (80 patients—37 males and 43 females).

Asthma was noted in 55 patients, eczema in 19 and urticaria in 11 (some suffered from more than one condition).

### Discussion

The importance of knowing the natural history of any disorder is that it enables us to forecast the outcome, and it also becomes much easier to assess the value of any new treatment by comparing it with a known and natural base line.

Little attention has been paid to the natural history of the common disorders of general practice, but it is a fascinating exercise to study this aspect of disease in this field because it makes its understanding and the management so much more rational.

Hay fever is a common disorder. Its frequency over a whole year is undramatic but to have nearly three per cent (the prevalence rate in this practice over 5 years), of one's practice descend upon one over a matter of 3 to 4 weeks each summer is dramatic and time-consuming.

There have been no reliable planned studies on the epidemiology of hay fever. The only comparable figures for prevalence are those collected by the General Register Office and the College of General Practitioners in their Morbidity Statistics from General Practice (Logan, W. P. D. and Cushion, A. A. 1958). In this investigation the annual prevalence rate for hay fever was 5 per 1,000 (patient consulting rate). Since the present study was over a period of 5 years the rates are comparable only if one assumes that not all the patients suffering from hay fever in Logan and Cushion's investigation attended during the one year that records were kept. Cushion and Logan also noted that the peak prevalence rates were between 15 and 45 years of age.

The most important conclusion that can be drawn is that there is a very definite tendency for the symptoms of hay fever to cease after the age of 40. If it does nothing else, this finding gives hope and comfort to the millions of teenagers and under-forties who suffer from hay fever at present.

### Summary

1. All patients with hay fever were investigated in a London suburban practice over a period of 5 years (1957-1962). There were 185 such patients in a practice of 6,411 patients—a prevalence rate of 28 per 1,000.

2. The prevalence rates at various ages showed very definite peaks in both sexes between 10 and 40 years of age.

3. Thirty-two patients over the age of 50 who had suffered from hay fever were questioned as to their experience with the condition. Three out of four reported that they ceased to suffer from hay fever by the age of 50.

4. These two findings suggest that the natural history of hay fever in the great majority is for symptoms to cease spontaneously by the age of 50.

5. The onset was before the age of 30 in 80 per cent of patients.

6. A positive family history was noted in only 15 per cent.

Associated allergic disorders (asthma, eczema, and urticaria) occurred in 43 per cent of the 185 patients.

### REFERENCE

- Logan, W. P. D. and Cushion, A. A. Studies on Medical and Population Subjects No. 14. *Morbidity Statistics from General Practice: Volume 1 (General)*. H.M.S.O., London, 1958.
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**Informationen:** for members of the International College of General Practice.

This report from the International College of General Practice breaks new ground in that it contains a full English translation after the German text. Dr Geiger reviews the 1962 congress at Salzburg and discusses further plans for 1963. A report on Danish Medical Services by Dr Bent and extracts from the presidential addresses to the American Academy of General Practice and the Canadian College of General Practice are also included. The only reference to general practice in this country is an unkind one by Dr Bratt in his address to the American Academy of General Practice. "You cannot spend two or three minutes with each patient and expect to establish and maintain a warm, personal relationship. You cannot hop from examining room to examining room practising mass-production medicine—such as I saw in England". True or false, that is what many of our continental colleagues will be reading about us!